EXHIBIT A
Tettemer & Associates
Project Understanding & Scope of Services

Project Understanding

On Wednesday, November 3, 2004, Kevin Brandt of TA attended a field meeting at the Grove Basin (Basin) site with Jim Borcuk of the Flood Control District and Tim Mim Mack of the City of Ontario. During the field meeting, Kevin Brandt was made aware of several issues regarding the Basin including:

1. Recent storm event(s) in October 2004 caused water levels in the Basin to nearly reach spillway crest.
2. Sink holes / caving of roadway sections on Grove Avenue (south easterly of the Basin).
3. Sink holes / caving of embankment at NW corner of the Basin.
4. Sink hole / caving of embankment at NE corner of the Basin.
5. Bubbling / seepage of water through the grouted rip rap along Grove Avenue , specifically at the SE corner of the site.

Also, made available to TA at the November 3, 2004 field meeting was a set of Grove Basin as-built drawings provided by Jim Borcuk of the Flood Control

District and several photos of the sink holes and bubbling of water through the grouted rip rap area provided by Tim Mim Mack, representing City of Ontario. TA also revisited the Basin site on Friday, November 5, 2004, and met with Flood Control District staff in an attempt to view the inside RCP joints at the Basin outlet and inlets. Visual inspections were conducted at the NW corner Basin RCP inlet pipe and the SE corner Basin outlet pipe. Access was difficult and accurate observations were not successful.

Based upon the above, as well as the discussions held during the field meetings, it is our understanding that:

- A potential seepage path exists at the SE corner RCP outlet alignment.
- Pressure head associated with the height of water within the Basin (near spillway crest) caused seepage flows along the SE outlet pipe alignment as well as bubbling up of water from the grouted rip rap area at the SE corner of the Basin.
- Saturated conditions and existing soil type (assumed to be fine silty materials) along with the lowering of the water level in the Basin may have created a condition in which the silty material entered the joints of the inlet and outlet RCPs and thus sink holes were created.
- Cause of sinkholes needs to be confirmed and appropriate remedy shown on plans and scoped in specifications.
- Sinkholes need to be repaired at all locations.
- Roadway section on Grove Basin needs repair.

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- The proposed work needs to be completed in an expeditious manner in order to open Grove Avenue.

Scope of Services

TASK 100 - Project Management and Meeting Attendance

- Project Meetings
- Project Management

TASK 200 – Project Research and As-built Information

- Review Available Plans and Reports – This task allows for the review of the Grove Basin as-built plans and reports as well as other plans and reports supplied by the City of Ontario and the Flood Control District.
- Geotechnical Investigation – This task allows for a geotechnical investigation to occur at the Grove Basin site. Four borings are proposed: one boring at the NW corner; one boring at the NE corner; one boring at the SE Corner and one boring along the outlet RCP alignment. Samples will be collected during boring activities and analyses will be conducted including water content, dry unit weight, gradation, liquid limit, plasticity index, compaction and unconfined compression. Geotechnical Engineering and evaluation recommendations will be provided for temporary excavations, pipeline bedding, backfill requirements and the design of shoring for trench excavation.
- Surveying Services – This task allows for establishing control at the Grove Basin site and creating a base map for Grove Basin. The data gained will be used to prepare a plan and profile sheet for the sink hole areas along Grove Basin to be removed and repaired.

TASK 300 – Construction Documents

- Prepare Construction Plans, Profiles and Details for Grove Basin Emergency Repair Work; includes 60%, 90% and Final Submittal assuming 8 sheets total.
- Prepare Special Provisions Section Construction Bid Documents
- Prepare Engineer's Opinion of Probable Construction Cost
- Prepare as-built drawings

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Tettemer & Associates
Project Understanding & Scope of Services

TASK 400 – Construction Support

- Bid Phase Services
- Construction Phase Services (RFIs and Submittals)

TASK 500 – Other Direct Project Costs

- Reproduction, mileage, plotting and messenger services.

It is our further understanding that the County of San Bernardino will be responsible for and provide the following:

1. Providing available digital information for the Grove Basin and Grove Avenue.
2. County will prepare boiler plate section of contract documents, merge TA's special provision sections with other sections of the Contract documents, and assemble the completed bid documents. The County will also be responsible for solicitation of construction bids, bid evaluation, and award of the construction contract.
3. The County will merge TA's Engineer's Estimate of Probable Construction Cost spreadsheet into their electronic special provisions package.
4. County will process and obtain environmental clearances and permits.
5. County will provide existing right-of-way maps to TA. County shall secure all right-of-way and temporary easements, if needed.
6. County will send out utility notices, provide utility maps to TA for plotting on plans, and prepare utility arrangements.